Fig. 1.

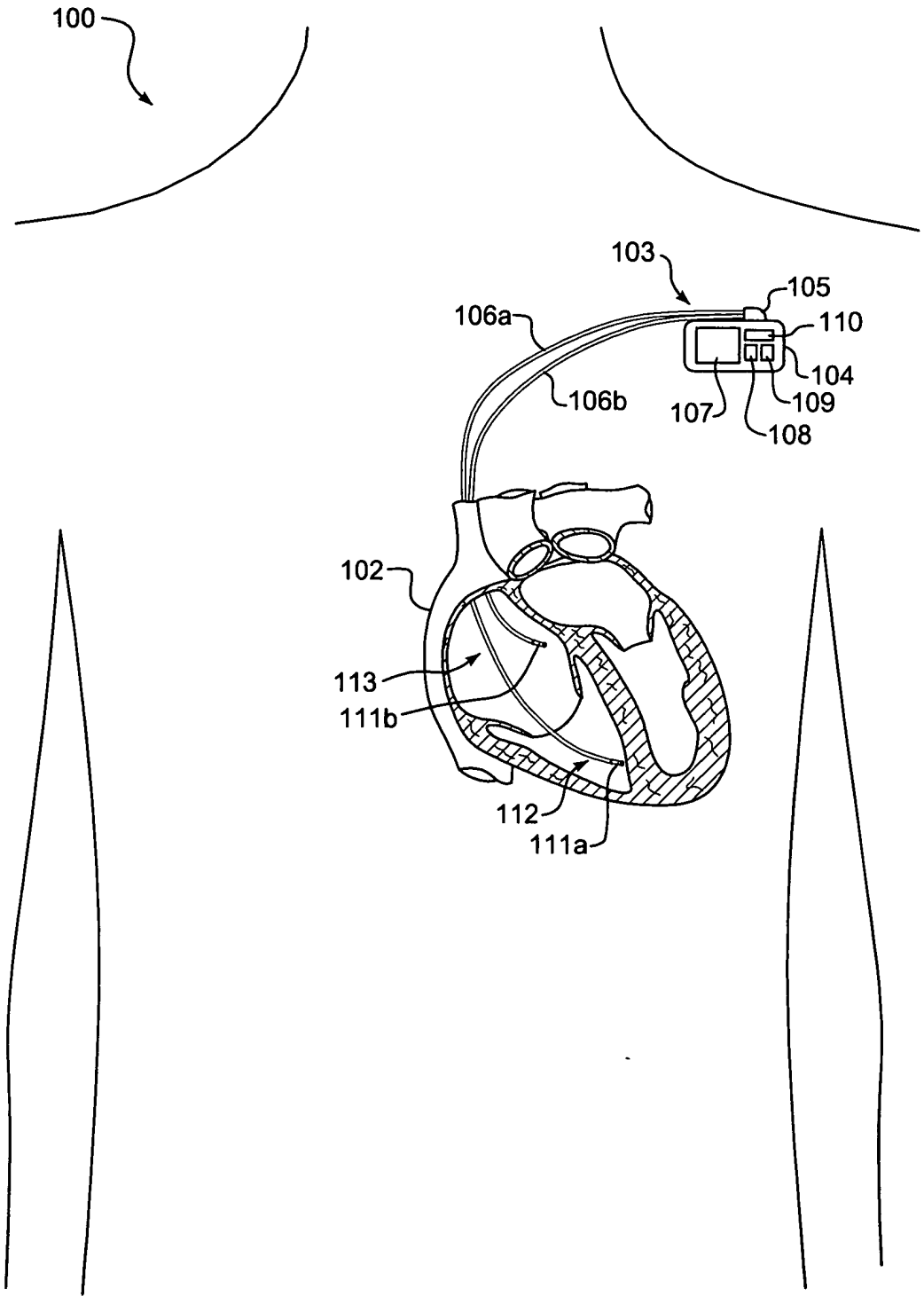


Figure 2.

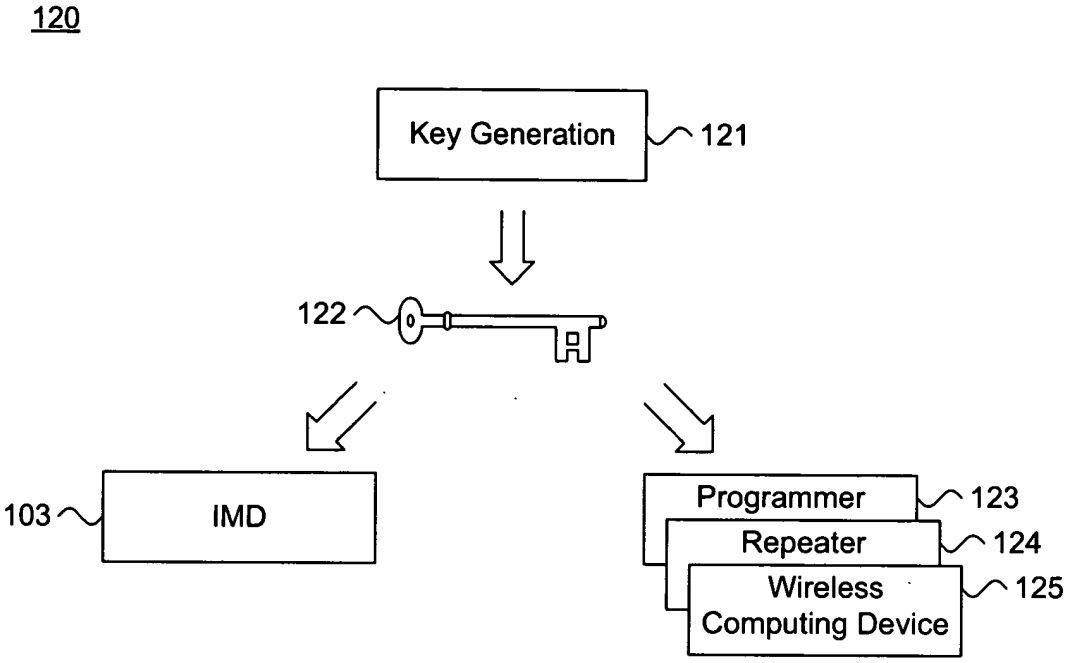

120
Key Generation
121
122
103
IMD
Programmer
123
Repeater
124
Wireless
Computing Device
125

Figure 3.

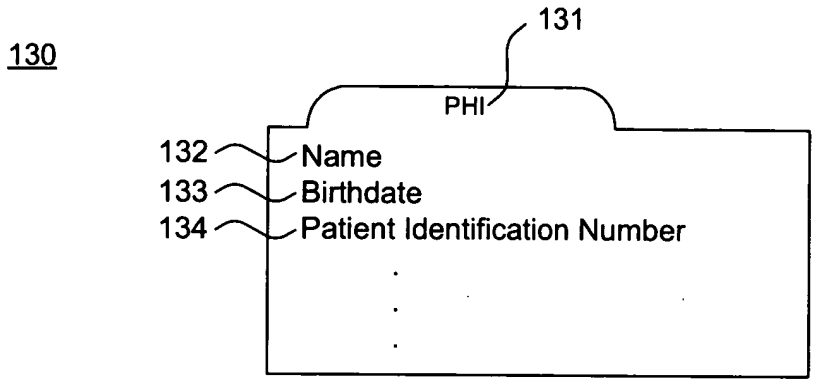


Figure 4A.

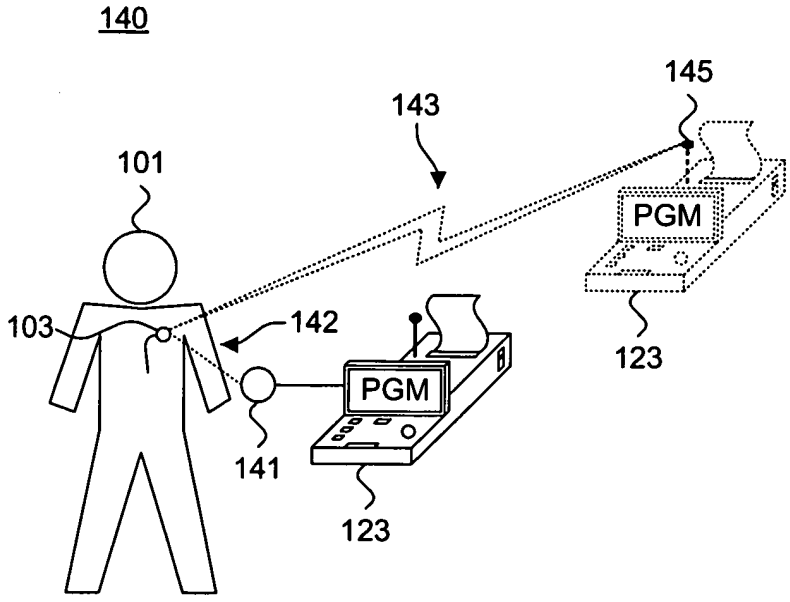


Figure 4B.

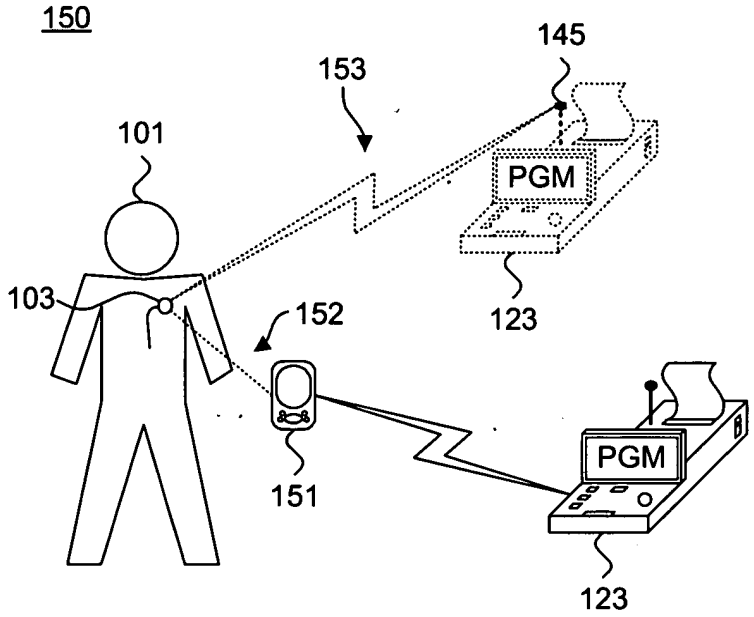


Figure 4C.

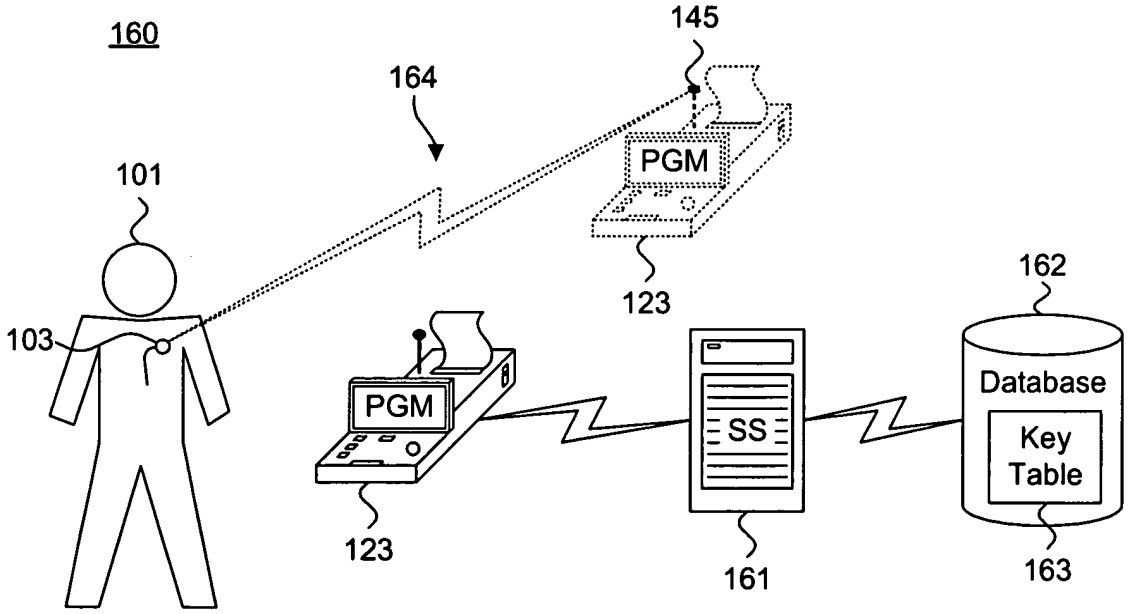


Figure 4D.

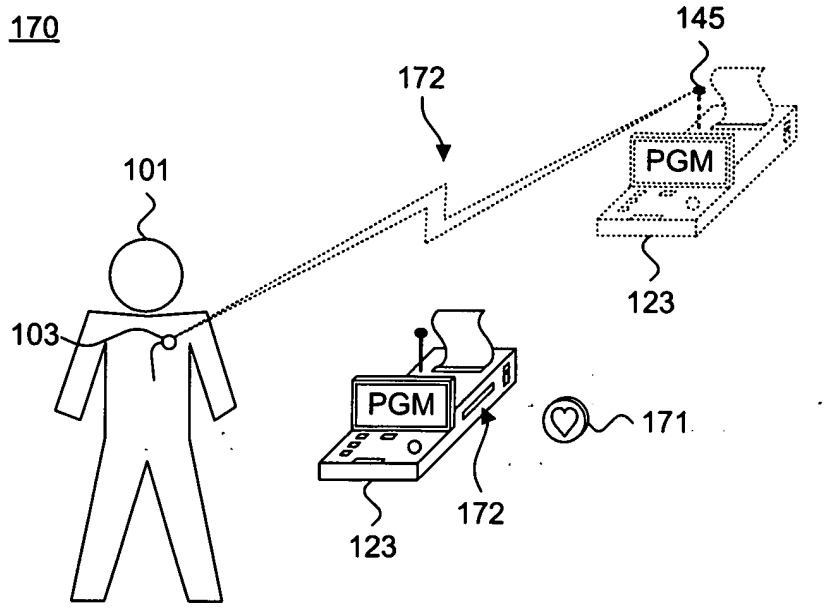


Figure 4E.

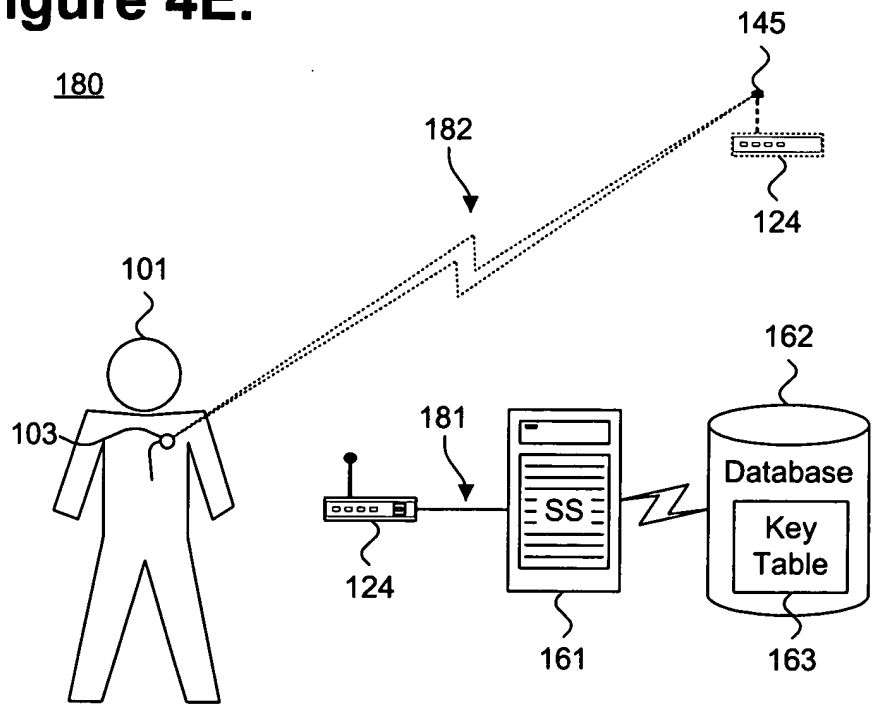


Figure 5.

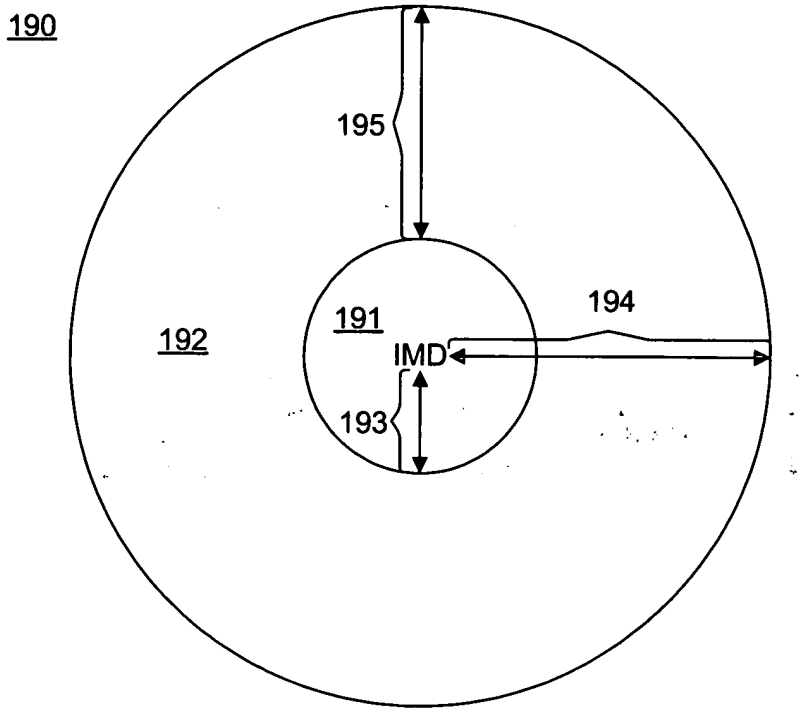


Figure 6.

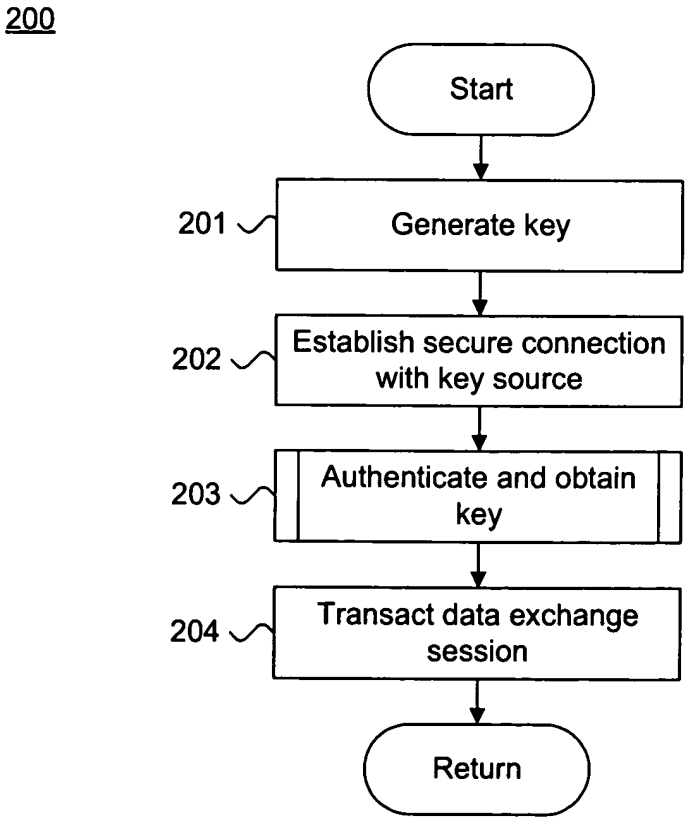


Figure 7.

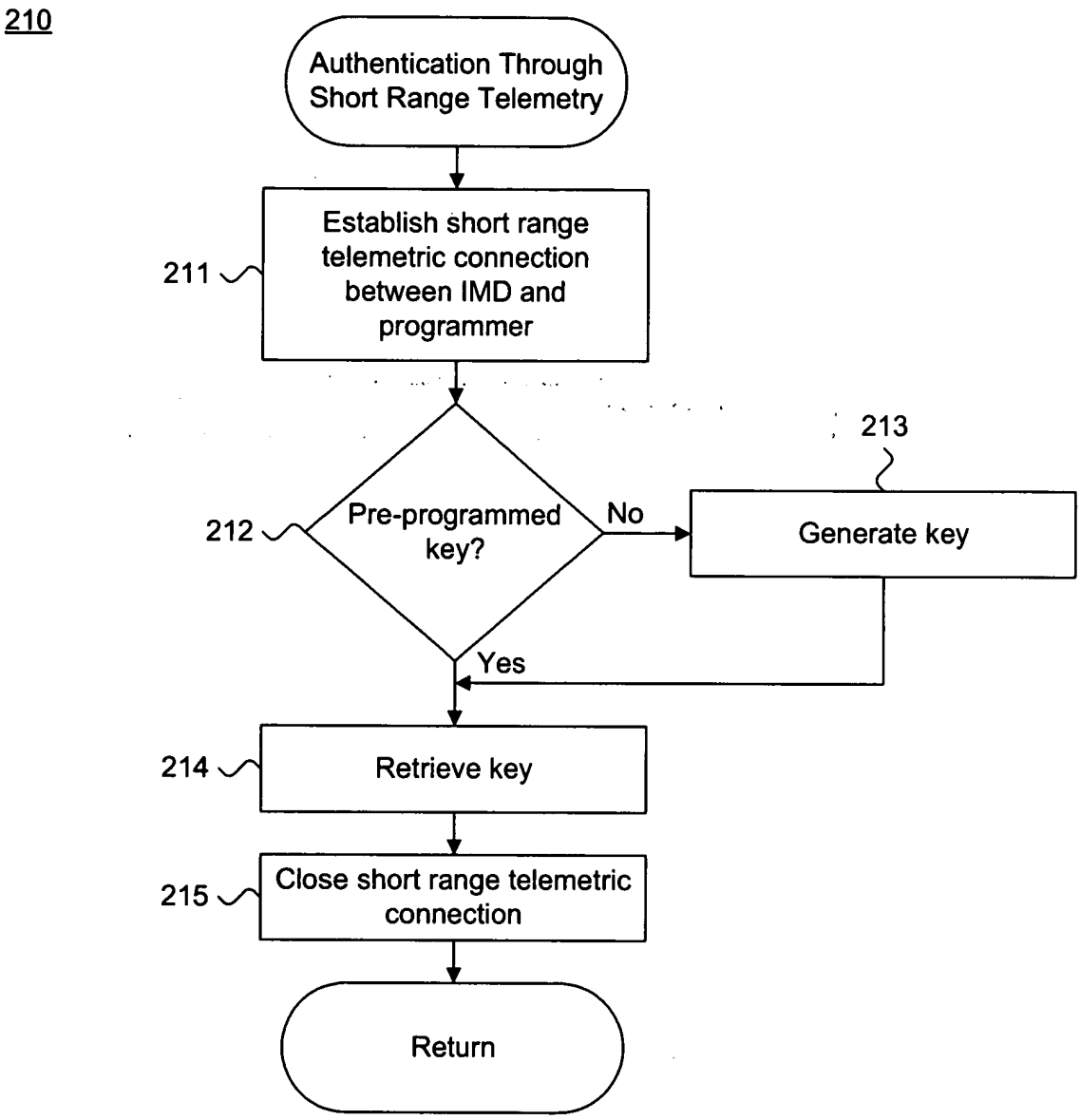

210
Authentication Through Short Range Telemetry
Establish short range telemetric connection between IMD and programmer
211
Pre-programmed key?
212
No
213
Generate key
Yes
Retrieve key
214
Close short range telemetric connection
215
Return

Figure 8.

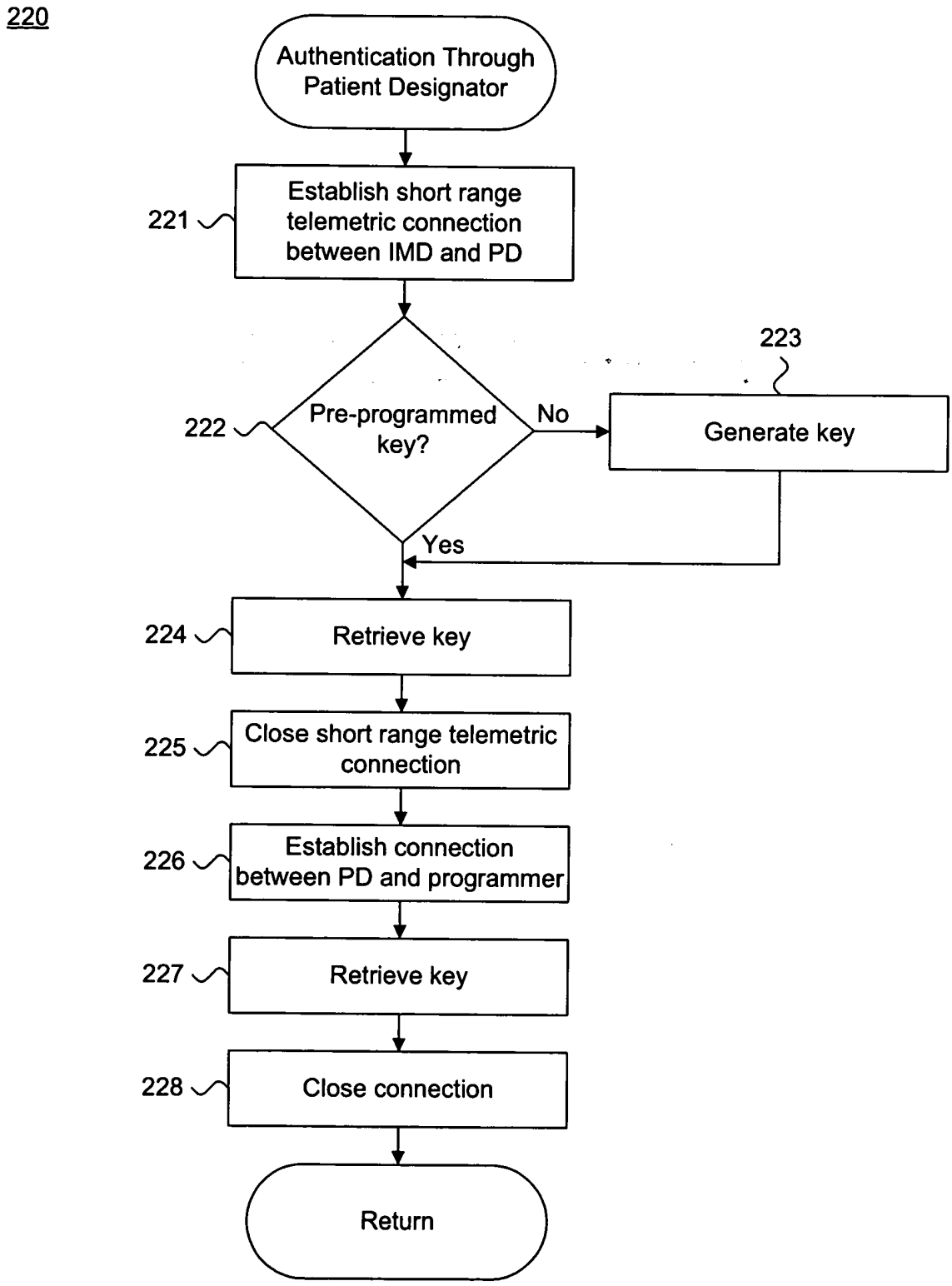

220
Authentication Through Patient Designator
221
Establish short range telemetric connection between IMD and PD
222
Pre-programmed key?
No
223
Generate key
Yes
224
Retrieve key
225
Close short range telemetric connection
226
Establish connection between PD and programmer
227
Retrieve key
228
Close connection
Return

Figure 9.

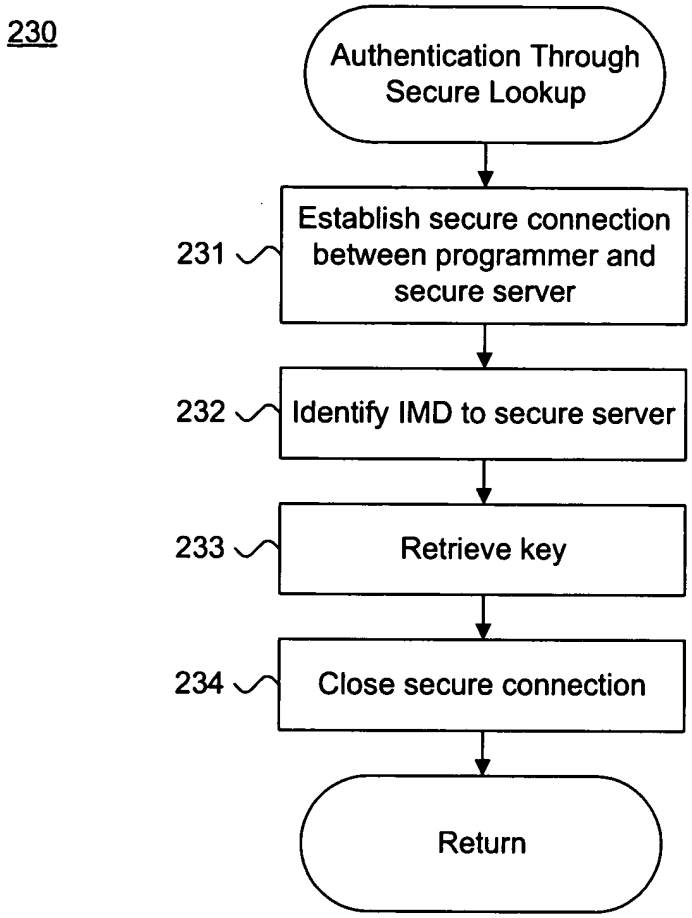

230
Authentication Through Secure Lookup
231
Establish secure connection between programmer and secure server
232
Identify IMD to secure server
233
Retrieve key
234
Close secure connection
Return

Figure 10.

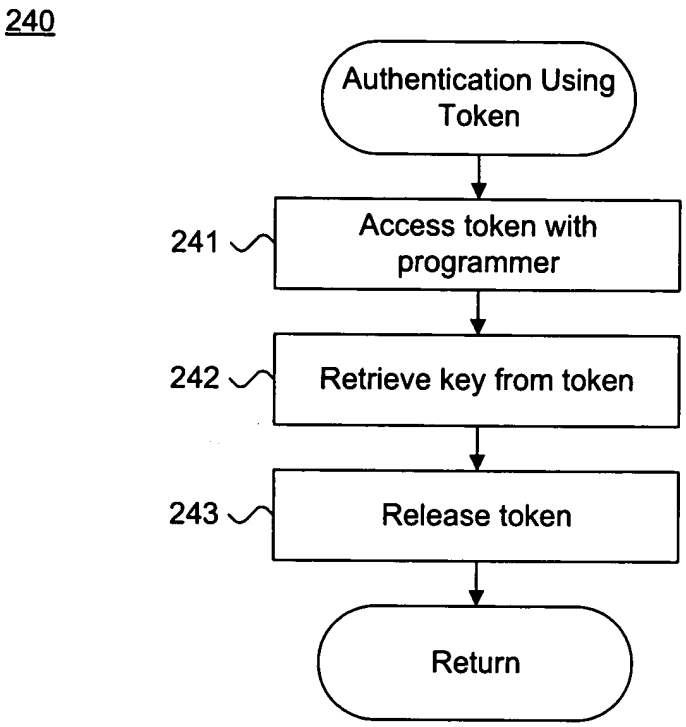
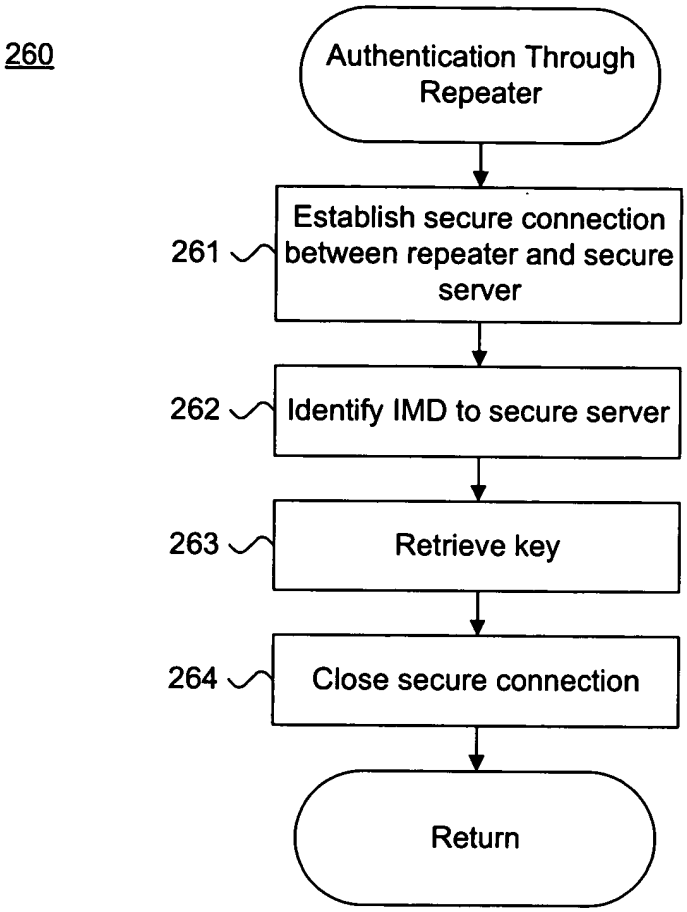

240
Authentication Using Token
241
Access token with programmer
242
Retrieve key from token
243
Release token
Return

Figure 11.


260
Authentication Through Repeater
261
Establish secure connection between repeater and secure server
262
Identify IMD to secure server
263
Retrieve key
264
Close secure connection
Return